

ABSTRACT OF THE DISCLOSURE

An olefin polymerization process is disclosed. The polymerization is performed in the presence of a clay, an activator, and a transition metal complex that has at least one pyridine moiety-containing ligand. The
5 presence of clay increases the catalyst activity. The process is suitable for making ultra-high molecular weight polyethylenes (UHMWPE). The UHMWPE produced has increased bulk density.